SAFECOM

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An innovative power backup solution for CATV networks.

Free and unlimited backup power

Reuse existing infrastructure and protect your network investment

Traditional network power backup solutions that rely on batteries and UPS are very expensive, require constant maintenance, and cannot provide the required network reliability due to their limited operation time and performance degradation during weather changes.

Safecom DPS Ver. 4 is the latest release of the DPS series – a power backup without batteries solution. It reduces the network powering cost and protects your investment in various ways:

- **Stop spending funds for batteries replacement** – By allocating part of the maintenance budget to the maintenance-free DPS, operators can dramatically reduce annual budgets and capital expenses on replacing and/or recycling batteries.
- **Reduce installation cost** – The DPS Ver. 4 can be installed instead of an existing Power Inserter, saving precious space in condensed enclosures and enabling installation during daytime with reduced labor costs and minimal service interruption.
- **Reduce the number of street cabinets** – Implementing the compact DPS Ver. 4 with its integrated Power Inserter results in network architecture with fewer street cabinets due to the elimination of UPS and batteries from the network.

Additional advantages of the DPS technology include:

- **Improve network reliability** In the event of a utility power outage, some of the inherent disadvantages of batteries are overcome (temperature effects, battery recharge time, etc.).
- **Environment-friendly technology** - Power saving and fewer batteries support efforts to reduce CO2 pollution and acid leakage into drainage systems.
- **Disaster recovery** – In cases of infrastructure destruction (hurricanes, flooding, etc), DPS is waterproof and can be easily recovered, as opposed to traditional UPS and batteries, which require huge infrastructure investment.

Tel 972-9-7968032 | Fax 972-9-7968033 | Hanoff St. (P.O. 132) Herut | Israel 40691 | E-mail: david@safecom.tv

US P. 5747888 EP P. 0708559 UK P. 0708559

The technology

Protection against power loss due to utility outages is managed by redirecting power between distant locations (on the electricity grid), utilizing the existing coaxial network or power cables. Compliant power boosters compensate voltage drops along the cable and ensure correct voltage supply – even over long distances.

The devices 'toggle' available power between two distant locations, such as optical nodes, trunk amplifiers, and line extender clusters. Power in the two-way DPS device is redirected from the '"normally"' powered area to the area prone to power outages. During normal operation, when there is no power outage at either end of the pair, the DPS acts as a power block to the other side.

DPS's power redundancy protects all optical nodes, trunk amplifiers, and line extenders, and is completely online. This ensures that there are no signal or data interruptions during operation.

Network Monitoring

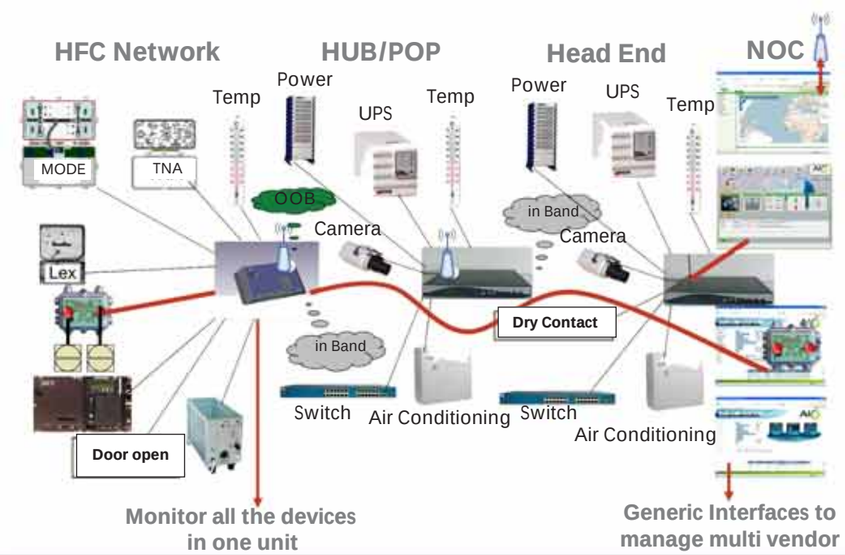
The DPS Ver. 4 uses a single monitoring connector for all 4 ports and can easily be integrated with any network management system.

The DPS capability for current measurement enables network managers to reduce costs by predicting various problems in the network, even before equipment failure. Unstable current may indicate a defective trunk amplifier, overheating power supply, or bad contacts. These conditions are prevented with the DPS's early detection.

DPS Technical Specifications

Electrical		
Max Current (each port)	17A	
Operational Voltage	Version 1: 48-75VAC	
Range	Version 2: 60-90VAC	
Power Consumption	48Vac@50Hz-1.8W 90Vac@50Hz-3.5W 48Vac@60Hz-1.5W 90Vac@60Hz-2.8W	
Must Release	18Vac	
Backup-mode		
Must Operate	48Vac	
Current 50Hz/60Hz	39mA / 31mA	
Total Rated Voltage	48 to 90 Vac	
Release Time	18msec(max)	
Mechanical		
Size (L X W X H)	6 x 5 x 3 in	
Weight	1.75 lbs	
All ports	5/8 "	
LED's indicators		
Two green LED's ON	DPS-Master mode	
Two red LED's ON	DPS backup mode	
Left LED - red	DPS-slave mode	
Right LED - green		

Environmental		
Operating Humidity	0-100%	
Operating Temperature	13-176 F	10-80 C
IP Standard	IPX8	
RF		
Shielding effectiveness	130dB	
Return Loss Min. [dB]	5-29MHz	16
	30-899MHz	17
	900-1000MHz	16
Reference Impedance	75 ohms	
Bandwidth	5-1000MHz	
Through Loss (In-Out) Max.[dB]	5-600MHz	Max 1dB
	750MHz	Max 1.2
	860-1000MHz	Max 1.7
Isolation (RF-AC in) Min. [dB]	30-1000MHz	Min 60dB
Hum Modulation (Max.[dB])	5-1000dB	-60dB
General		
Life Expectancy	500,000 switching	
Broadcast Continuity	**Online**	
Monitoring		
Current from local P.S	0-15A +/-1%	
Current from remote P.S	0-15A +/-1%	
Voltage-all DPS ports	0-90V +/-0.5%	
Status of DPS	Master/Slave	



Power Booster (**patent pending**)

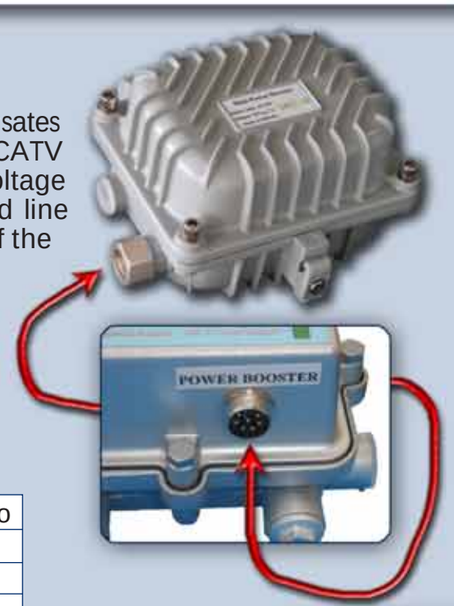
The Power Booster is a passive, standalone element that compensates the voltage drop over the trunk coax or electricity cables in a CATV distribution system. Power Booster overcomes the minimum voltage level limitation required by fiber nodes, trunk amplifiers, and line extenders. It can also be used to increase the coverage area of the DPS and the distance between remote power sources.

The Power Booster can be connected directly to the DPS Ver. 4 by a single cable connection. It is normally installed where voltage is usually no less than 45V.

The Power Booster has two models:

- High-current, 15A load
- Medium-current, 7A load

60 V model	90 V model	Voltage Gain ratio
input 55-66Vac	input 75-90 Vac	1 ; 1
input 50-55Vac	input 65-75 Vac	1.2 ; 1
input < 50Vac	input < 65 Vac	1.32 ; 1



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